

OIPE

2

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/918,359

DATE: 08/07/2001

TIME: 13:29:41

Input Set : A:\LEX-0208-USA SEQLIST.txt
 Output Set: N:\CRF3\08072001\I918359.raw

ENTERED

4 <110> APPLICANT: Walke, D. Wade
 5 Mathur, Brian
 6 Turner, C. Alexander Jr.
 7 Friddle, Carl Johan
 8 Gerhardt, Brenda
 10 <120> TITLE OF INVENTION: Novel Human Ion Channel Proteins and Polynucleotides

Encoding the

11 Same
 13 <130> FILE REFERENCE: LEX-0208-USA
 C--> 15 <140> CURRENT APPLICATION NUMBER: US/09/918,359
 C--> 15 <141> CURRENT FILING DATE: 2001-07-30
 15 <150> PRIOR APPLICATION NUMBER: US 60/221,643
 16 <151> PRIOR FILING DATE: 2000-07-28
 18 <150> PRIOR APPLICATION NUMBER: US 60/222,503
 19 <151> PRIOR FILING DATE: 2000-08-02
 21 <160> NUMBER OF SEQ ID NOS: 8
 23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
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 26 <211> LENGTH: 1638
 27 <212> TYPE: DNA
 28 <213> ORGANISM: homo sapiens
 30 <400> SEQUENCE: 1

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32	aatgagggca	gccaacaccg	caggagcatt	tgctccctgg	gtgcccgttc	cggctcccag	120
33	gccagcatcc	acggctggac	agagggcaac	tataactact	acatcgagga	agacgaagac	180
34	ggsgaggagg	aggaccagt	gaaggacgac	ctggcagaag	aggaccagca	ggcaggggag	240
35	gtcaccaccg	ccaagcccga	gggccccagc	gacctccgg	ccctgctgtc	cacgctgaat	300
36	gtgaacgtgg	gtggccacag	ctaccagctg	gactactgcg	agctggccgg	cttccccaa	360
37	acgcgcctag	gtcgccctggc	cacctccacc	agccgcagcc	gccagctaag	ctgtgctgac	420
38	gactacagag	agcagacaga	cgaatacttc	ttcgaccgcg	acccggccgt	cttccagctg	480
39	gtctacaatt	tctacctgtc	cggggtgctg	ctgggtgctg	acgggctgtg	tccgcgccgc	540
40	ttcctggagg	agctgggcta	ctggggcgctg	cggtctcaagt	acacgccacg	ctgctgccgc	600
41	atctgcttcg	aggagcggcg	cgacgagctg	agcgaacggc	tcaagatcca	gcacgagctg	660
42	cgcgcgcagg	cgcaggtcga	ggaggcggag	gaactcttcc	gcgacatgcg	cttctaccgc	720
43	ccgcagcggc	gccgcctctg	gaacctcatg	gagaagccrt	tctcctcggt	ggccgccaa	780
44	gccatcgggg	tggcctccag	caccttcctg	ctcgtctccg	tgggtggcgt	ggcgtcaac	840
45	accgtggagg	agatgcagca	gcactcgggg	cagggcgagg	gcggccaga	cctgcggccc	900
46	atcctggagc	acgtggagat	gctgtgcatg	ggcttcttca	cgctcgagta	cctgctgcgc	960
47	ctagcctcca	cgcccgaact	gaggcgcttc	gcgcgcagcg	ccctcaacct	ggtggacctg	1020
48	gtggccatcc	tgccgctcta	ccttcagctg	ctgctcgagt	gcttcacggg	cgagggccac	1080
49	caacgcggcc	agacggtggg	cagcgtgggt	aaggtgggtc	aggtgttgcg	cgtcatgcgc	1140
50	ctcatgcgca	tcttccgcat	cctcaagctg	gcgcgccact	ccaccggact	gcgtgccttc	1200
51	ggcttcacgc	tgcgccagt	ctaccagcag	gtgggctgcc	tgctgctctt	catcgccatg	1260
52	ggcatcttca	ctttctctgc	ggctgtctac	tctgtggagc	acgatgtgcc	cagcaccaac	1320
53	ttactacca	tccccactc	ctgggtggtg	gccgcgggtg	gcctctccac	cgtgggctac	1380
54	ggagayatgt	accagagac	ccacctgggc	aggttttttg	ccttctctctg	cattgctttt	1440
55	gggatcattc	tcaacgggat	gccatttcc	atcctctaca	acaagttttc	tgattactac	1500
56	agcaagctga	aggcttatga	gtataccacc	atacgcaggg	rgaggggaga	ggtgaacttc	1560

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57 atgcagagag ccagaaagaa gatagctgag tgtttgcttg gaagcaaccc aagctcacc 1620
58 ccaagacaag agaattag 1638
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61 <211> LENGTH: 545
62 <212> TYPE: PRT
63 <213> ORGANISM: homo sapiens
65 <400> SEQUENCE: 2
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68 Asn Thr Thr Glu Asn Glu Gly Ser Gln His Arg Arg Ser Ile Cys Ser
69 20 25 30
70 Leu Gly Ala Arg Ser Gly Ser Gln Ala Ser Ile His Gly Trp Thr Glu
71 35 40 45
72 Gly Asn Tyr Asn Tyr Tyr Ile Glu Glu Asp Glu Asp Gly Glu Glu Glu
73 50 55 60
74 Asp Gln Trp Lys Asp Asp Leu Ala Glu Glu Asp Gln Gln Ala Gly Glu
75 65 70 75 80
76 Val Thr Thr Ala Lys Pro Glu Gly Pro Ser Asp Pro Pro Ala Leu Leu
77 85 90 95
78 Ser Thr Leu Asn Val Asn Val Gly Gly His Ser Tyr Gln Leu Asp Tyr
79 100 105 110
80 Cys Glu Leu Ala Gly Phe Pro Lys Thr Arg Leu Gly Arg Leu Ala Thr
81 115 120 125
82 Ser Thr Ser Arg Ser Arg Gln Leu Ser Leu Cys Asp Asp Tyr Glu Glu
83 130 135 140
84 Gln Thr Asp Glu Tyr Phe Phe Asp Arg Asp Pro Ala Val Phe Gln Leu
85 145 150 155 160
86 Val Tyr Asn Phe Tyr Leu Ser Gly Val Leu Leu Val Leu Asp Gly Leu
87 165 170 175
88 Cys Pro Arg Arg Phe Leu Glu Glu Leu Gly Tyr Trp Gly Val Arg Leu
89 180 185 190
90 Lys Tyr Thr Pro Arg Cys Cys Arg Ile Cys Phe Glu Glu Arg Arg Asp
91 195 200 205
92 Glu Leu Ser Glu Arg Leu Lys Ile Gln His Glu Leu Arg Ala Gln Ala
93 210 215 220
94 Gln Val Glu Glu Ala Glu Glu Leu Phe Arg Asp Met Arg Phe Tyr Gly
95 225 230 235 240
96 Pro Gln Arg Arg Arg Leu Trp Asn Leu Met Glu Lys Pro Phe Ser Ser
97 245 250 255
98 Val Ala Ala Lys Ala Ile Gly Val Ala Ser Ser Thr Phe Val Leu Val
99 260 265 270
100 Ser Val Val Ala Leu Ala Leu Asn Thr Val Glu Glu Met Gln Gln His
101 275 280 285
102 Ser Gly Gln Gly Glu Gly Gly Pro Asp Leu Arg Pro Ile Leu Glu His
103 290 295 300
104 Val Glu Met Leu Cys Met Gly Phe Phe Thr Leu Glu Tyr Leu Leu Arg
105 305 310 315 320
106 Leu Ala Ser Thr Pro Asp Leu Arg Arg Phe Ala Arg Ser Ala Leu Asn
107 325 330 335

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108 Leu Val Asp Leu Val Ala Ile Leu Pro Leu Tyr Leu Gln Leu Leu Leu
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110 Glu Cys Phe Thr Gly Glu Gly His Gln Arg Gly Gln Thr Val Gly Ser
111          355          360          365
112 Val Gly Lys Val Gly Gln Val Leu Arg Val Met Arg Leu Met Arg Ile
113          370          375          380
114 Phe Arg Ile Leu Lys Leu Ala Arg His Ser Thr Gly Leu Arg Ala Phe
115 385          390          395          400
116 Gly Phe Thr Leu Arg Gln Cys Tyr Gln Gln Val Gly Cys Leu Leu Leu
117          405          410          415
118 Phe Ile Ala Met Gly Ile Phe Thr Phe Ser Ala Ala Val Tyr Ser Val
119          420          425          430
120 Glu His Asp Val Pro Ser Thr Asn Phe Thr Thr Ile Pro His Ser Trp
121          435          440          445
122 Trp Trp Ala Ala Val Ser Ile Ser Thr Val Gly Tyr Gly Asp Met Tyr
123          450          455          460
124 Pro Glu Thr His Leu Gly Arg Phe Phe Ala Phe Leu Cys Ile Ala Phe
125 465          470          475          480
126 Gly Ile Ile Leu Asn Gly Met Pro Ile Ser Ile Leu Tyr Asn Lys Phe
127          485          490          495
128 Ser Asp Tyr Tyr Ser Lys Leu Lys Ala Tyr Glu Tyr Thr Thr Ile Arg
129          500          505          510
130 Arg Glu Arg Gly Glu Val Asn Phe Met Gln Arg Ala Arg Lys Lys Ile
131          515          520          525
132 Ala Glu Cys Leu Leu Gly Ser Asn Pro Gln Leu Thr Pro Arg Gln Glu
133          530          535          540
134 Asn
135 545

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137 <210> SEQ ID NO: 3

138 <211> LENGTH: 180

139 <212> TYPE: DNA

140 <213> ORGANISM: homo sapiens

142 <400> SEQUENCE: 3

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147 <210> SEQ ID NO: 4

148 <211> LENGTH: 59

149 <212> TYPE: PRT

150 <213> ORGANISM: homo sapiens

152 <400> SEQUENCE: 4

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155 Pro Gly Cys Cys Trp Cys Ser Thr Gly Cys Val Arg Ala Ala Ser Trp
156          20          25          30
157 Arg Ser Trp Ala Thr Gly Ala Cys Gly Ser Ser Thr Arg His Ala Ala
158          35          40          45
159 Ala Ala Ser Ala Ser Arg Ser Gly Ala Thr Ser
160          50          55

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162 <210> SEQ ID NO: 5
163 <211> LENGTH: 2310
164 <212> TYPE: DNA
165 <213> ORGANISM: homo sapiens
167 <400> SEQUENCE: 5
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169 tccctcctaa cacttgcttc ttccaaatca gcaagattag agcagtcaac agctgactgc 120
170 gttcagaccc tgcaggctgg gctggcctgc ccaggacctg agaaggggca gctccggtgg 180
171 caatgtctga gcccttagct gtgctggctc gggctggcct ctctaagaca gtgcaggcca 240
172 cgtgatccat cctcctagag gcagttagca ggtgaggac ccctacgaca gccaggagga 300
173 aaaagctagg cgtccacttt ccgcagccat gctcaaacag agtgagagga gacggtcctg 360
174 gagctacagg ccctggaaca cgacggagaa tgagggcagc caacaccgca ggagcatttg 420
175 tccctgggt gccggttccg gctcccaggc cagcatccac ggctggacag agggcaacta 480
176 taactactac atcgaggaag acgaagacgg sgaggaggag gaccagtga aggacgacct 540
177 ggcagaagag gaccagcagg caggggaggt caccaccgcc aagcccgagg gccccagcga 600
178 ccctccggcc ctgctgtcca cgctgaatgt gaacgtgggt ggccacagct accagctgga 660
179 ctactgcgag ctggccggct tccccaaagac gcgcctaggt cgctggacca cctccaccag 720
180 ccgcagccgc cagctaagcc tgtgcgacga ctacgaggag cagacagacg aatacttctt 780
181 cgaccgcgac ccggccgtct tccagctggt ctacaatttc tacctgtccg ggggtgctgct 840
182 ggtgctcgac gggtgtgtc cgcccgctt cctggaggag ctgggctact gggcgctgcg 900
183 gctcaagtac acgccacgct gctgccgcat ctgcttcgag gagcggcgcg acgagctgag 960
184 cgaacggctc aagatccagc acgagctgcg cgccagggcg caggtcgagg aggcggagga 1020
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198 cctctacaac aagttttctg attactacag caagctgaag gcttatgagt ataccacat 1860
199 accgagggcg aggggagagg tgaacttcat gcagagagcc agaaagaaga tagctgagt 1920
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201 tgtggctggt agattccatg aacttcaagg cttcattgct ctttttttaa tcattatgat 2040
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203 gcctctagaa atactcattt tgccccaaac tcagaatgtc tcatagtgtc tctgtgtgt 2160
204 gtgaaacatc tgaccttctc aatgacgttg atattgaaaa cctgagggga gcaacagctt 2220
205 agatttttct tgtagcttct cgtggcatct agctcaataa atatttttgg acttgaaaaa 2280
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209 <210> SEQ ID NO: 6
210 <211> LENGTH: 1458
211 <212> TYPE: DNA
212 <213> ORGANISM: Homo sapiens
214 <400> SEQUENCE: 6

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215 atgagctcag cctgctggga ggccacaggg agatgcaggc tgggcggcgg gtggatggtt 60
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217 tggagctgcc gcttctgctc tcagcaggat gatgggcagg acagggagag gctgacctac 180
218 ttccagaacc tgcctgagtc tctgacttcc ctccctgggtgc tgctgaccac ggccaacaac 240
219 cccgatgtga tgattcctgc gtattccaag aaccgggcct atgccatctt cttcatagtc 300
220 ttactgtga taggaagcct gtttctgatg aacctgctga cagccatcat ctacagtcag 360
221 ttccggggct acctgatgaa atctctccag acctcgctgt ttcggaggcg gctgggaacc 420
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223 acccgccgag gcccgagtac cagtctccgt ttctgcagag cgcccagttc ctcttcggcc 540
224 actactactt tgactacctg gggaacctca tcgccctggc aaacctggtg tccatttgcg 600
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227 tgggcctgcg agggtagctg tcctacccca gcaacgtgtt tgacgggctc ctcaccgttg 780
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230 gtggccagta ccgtcctggg cctggtgcag aacatgcgtg cgtttgccgg gatcctggtg 960
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233 cagctggagt actgggcca caacttcgat gactttgcgg ctgccctggt cactctgtgg 1140
234 aacttgatgg tggatgaaca ctggcaggtg tttctggatg catatcgcg ctactcaggc 1200
235 ccgtggtcca agatctattt tgtattgtgg ttgctgggtg cgtctgtcat ctgggtcaac 1260
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237 cagccccttg ctgggacccc agaggccacc taccagatga ctgtggagct cctgttcagg 1380
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241 <210> SEQ ID NO: 7

242 <211> LENGTH: 485

243 <212> TYPE: PRT

244 <213> ORGANISM: Homo sapiens

246 <400> SEQUENCE: 7

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249 Gly Trp Met Val Pro Thr Gly Trp Val Arg Gly Leu Glu Leu Ser Leu
250 20 25 30
251 Trp Gly Gly Asp Pro Val Val Pro Trp Ser Cys Arg Phe Cys Ser Gln
252 35 40 45
253 Gln Asp Asp Gly Gln Asp Arg Glu Arg Leu Thr Tyr Phe Gln Asn Leu
254 50 55 60
255 Pro Glu Ser Leu Thr Ser Leu Leu Val Leu Thr Thr Ala Asn Asn
256 65 70 75 80
257 Pro Asp Val Met Ile Pro Ala Tyr Ser Lys Asn Arg Ala Tyr Ala Ile
258 85 90 95
259 Phe Phe Ile Val Phe Thr Val Ile Gly Ser Leu Phe Leu Met Asn Leu
260 100 105 110
261 Leu Thr Ala Ile Ile Tyr Ser Gln Phe Arg Gly Tyr Leu Met Lys Ser
262 115 120 125
263 Leu Gln Thr Ser Leu Phe Arg Arg Arg Leu Gly Thr Arg Ala Ala Phe
264 130 135 140
265 Glu Val Leu Ser Ser Met Val Gly Glu Gly Gly Ala Phe Pro Gln Ala

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VERIFICATION SUMMARY

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Input Set : A:\LEX-0208-USA SEQLIST.txt
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L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date